



SMVP Series

Magnetically Coupled and Sealless Vane Pumps

Sliding Vane Efficiency, Sealless Reliability

The sliding vane design combined with a sealless magnetic coupling is ideal for meeting the growing need of zero shaft leakage when handling expensive, hazardous or hard-to-seal fluids.

Operating Advantages

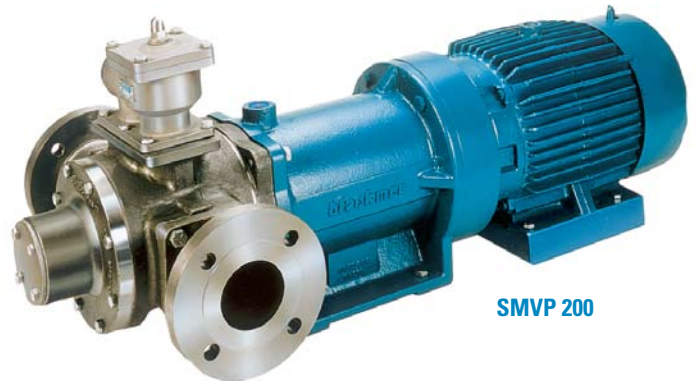
- Samarium-cobalt magnets
- Extended bearing life
- Dry-run capability
- Cooling Passages
- Sustained high level performance
- Containment can
- Drain Plugs

Flow Rates and Temperature Capabilities

The SMVP pumps have flow rates of 4 to 215 U.S. gpm (15 to 813 L/min.) and operating temperatures of -40°F to 200°F (-40°C to 96°C).

Construction

These magnetically-coupled pumps are constructed of stainless steel. SMVP pumps offer the best combined characteristics of sustained high level performance, energy efficiency, trouble-free operation and low maintenance cost.



SMVP 200



Typical Applications

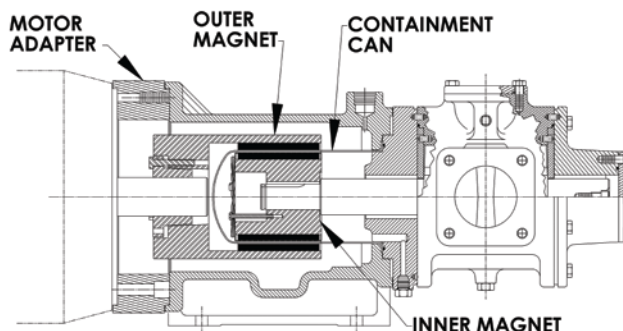
- | | |
|--------------------------|-----------------------|
| ■ Acetaldehyde, 100% | ■ Ethanol |
| ■ Acetophenone | ■ Formaldehyde |
| ■ Acrylic Acid | ■ Hexane, dry |
| ■ Arsenic Acid | ■ Hydrogen Peroxide |
| ■ Benzyl Chloride, 100% | ■ Hydrogen Sulfide |
| ■ Cumene | ■ Methyl Ethyl Ketone |
| ■ Cyclohexane | ■ Phenol |
| ■ Dichlorobenzene, Ortho | ■ Toluene |
| ■ Diisocyanate | ■ Xylene/Xylol |



Reliable Technology

Blackmer rotary vane pumps have long been the preferred technology for handling Volatile Organic Compounds (VOCs), and a wide range of other thin to viscous fluids. Blackmer has combined this proven sliding vane design with a sealless magnetic coupling to meet the growing need for zero shaft leakage when handling expensive, hazardous or hard-to-seal fluids.

Environmental concerns, workplace safety, EPA requirements and local government agencies are now demanding the Best Available Control Technology (BACT) to prevent fugitive emissions. And that's precisely the control technology that the Blackmer SMVP pumps deliver.



Samarium-Cobalt Magnet

World-Class Quality From Start To Finish

The SMVP pumps are manufactured and tested in conformance with ISO 9001 certification. Blackmer's world-wide reputation for superior product quality begins with extensive research and development, computer aided design, integrated manufacturing capabilities and excellent application assistance.

In some applications, selecting the right sealless pump may require more detailed information than is presented here. Your Blackmer representative can help you find the correct equipment to help ensure the best performance possible for your specific application.



Models Available

- SMVP15
- SMVP30
- SMVP50
- SMVP100
- SMVP200



Sliding Vane Pumps

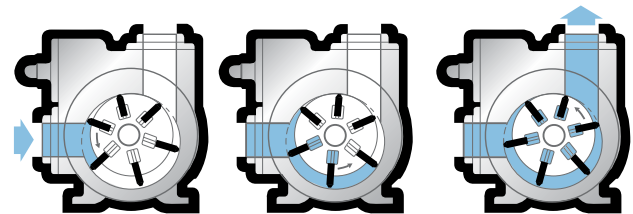
Options and Specifications

- Casing:** corrosion resistant stainless steel
- Drain Plugs:** allow for easy draining, standard on all models
- End Discs:** SMVP15 and 30 models – carbon; SMVP50, 100 and 200 models – Chem Disc
- Rotor & Shaft:** 316 stainless steel
- Vanes:** Duravane or optional extra-clearance laminate.
- Elastomer:** PTFE
- Bearings:** metal impregnated graphite
- Magnets:** samarium-cobalt
- Coupling Housing:** ductile iron with NPT tapped temperature probe hole
- Containment Can:** SMVP15 and 30 models – 316 stainless steel. SMVP50, 100 and 200 models – Alloy C
- Flanges:** ANSI 150 lb.
- Motor Coupling Adaptor Option:** allows baseplate mounting of a NEMA foot mounted motor or gearbox to the pump assembly

Design Parameters

- Flow Rates:** 4 to 215 U.S. gpm (15 to 813 L/min.)
- Operating Temperatures:** -40°F to 200°F (-40°C to 96°C)
For operating temperatures above 200°F (96°C), consult factory.
- Viscosity Range:** SMVP15 and 30 models – to 5,000 ssu (1,050 cSt). SMVP50 and 100 models – to 10,000 ssu (2,200 cSt). SMVP200 model – to 25,000 ssu (5,250 cSt)
- Maximum Differential Pressure:** SMVP15, 30, 50 and 100 models – 125 psi (8.62 bar). SMVP200 model - 100 psi (6.89 bar)
- Maximum Working Pressure:** SMVP15, 30, 50 and 100 models – 175 psi (12.07 bar) SMVP200 model – 150 psi (10.34 bar)

How Blackmer's sliding vane action works



Pump Performance Data

Model	RPM	At 22 cSt (100 ssu) and 50 psi (3.45 bar)		Maximum Differential Pressure	Maximum Viscosity*	Maximum Temperature*	Maximum Working Pressure*
		Flow Rate	Power				
		gpm (L/min)	hp (kW)				
SMVP15	1,750	17 (64)	1.2 (.9)	125 (8.6)	5,000 (1,050)	200 (93.3)	175 (12.1)
	1,450	14 (52)	0.8 (0.6)				
SMVP30	1,750	37 (142)	2.2 (0.9)	125 (8.6)	10,000 (2,200)	200 (93.3)	175 (12.1)
	1,450	31 (117)	1.5 (1.1)				
SMVP50	1,750	66 (251)	4.2 (3.1)	125 (8.6)	25,000 (5,250)	200 (93.3)	150 (10.3)
	1,450	55 (207)	3.2 (2.4)				
SMVP100	1,750	110 (416)	6.2 (4.6)	100 (6.9)			
	1,450	91 (344)	4.6 (3.4)				
SMVP200	1,150	215 (813)	9.2 (6.9)	100 (6.9)			
	780	144 (544)	5.6 (4.2)				

* For applications that require fluid viscosities, operating temperatures or working pressures greater than those listed, please consult the factory.

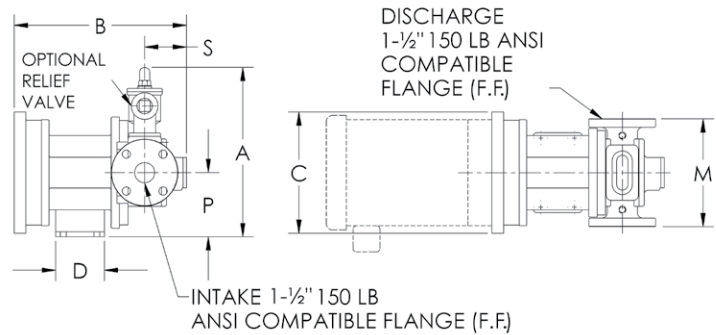
** Centipoise (cP) = centistokes (cSt) at fluid specific gravity of 1.0



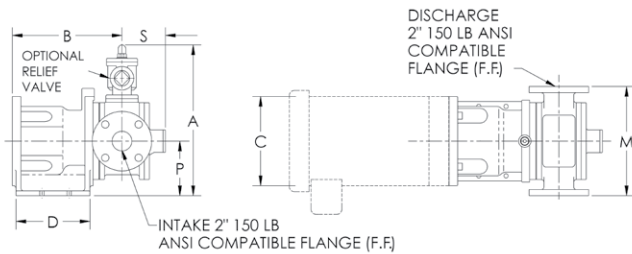
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Magnetic Coupling Data

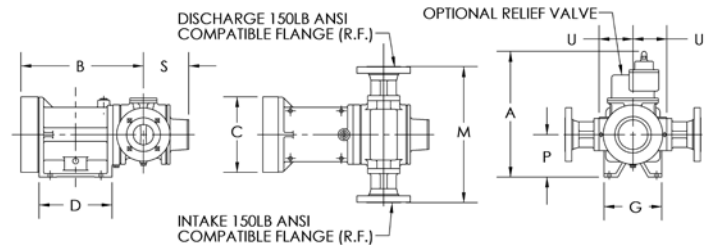
Pump Model	Coupling Size	Torque (ft/lb)	Nema Motor Frame Size
SMVP15 SMVP30	MC10	10	143TC-145TC 182TC-184TC
	MC20	20	182TC-184TC 213TC-215TC
SMVP50 SMVP100	MC60	60	182TC-184TC 213TC-215TC 254TC-256TC
	MC80	80	254TC-256TC 284TC-286TC
SMVP200	MC130	130	254TC-256TC 284TC-286TC



SMVP15/SMVP30 Model



SMVP50/SMVP100 Model



SMVP200 Model

Pump Dimensions

Pump Model	Units	A	B ¹	C ¹	D	G	M	P	S	Approx. Wt. Less Motor
SMVP15 SMVP30	in.	12 $\frac{5}{8}$	12 $\frac{5}{8}$	9	3 $\frac{3}{8}$	—	8	4 $\frac{1}{4}$	3 $\frac{3}{8}$	79 lbs.
	mm	321	327	229	92	—	203	121	79	36 kg
SMVP50 SMVP100	in.	15 $\frac{5}{16}$	11 $\frac{1}{2}$	9	7 $\frac{1}{2}$	—	11	5 $\frac{1}{2}$	4 $\frac{1}{8}$	125 lbs.
	mm	386	292	229	191	—	279	140	111	57 kg
SMVP200	in.	18 $\frac{1}{2}$	17 $\frac{3}{8}$	11 $\frac{1}{2}$	10 $\frac{3}{8}$	8 $\frac{1}{2}$	20	6 $\frac{1}{4}$	6 $\frac{1}{16}$	340 lbs.
	mm	470	448	283	273	216	508	159	170	140 kg

¹ Dimension shown is for 213TC-215TC motor frame for the SMVP15 through SMVP100 models, and 254TC-256TC motor frame size for the SMVP200 model

Sales Information and Equipment Application Assistance

Blackmer has a world wide distribution network to assist you in specifying any of our family of pumps, compressors and other equipment for your application.

For more information or to find the distributor nearest to you, please contact us at the telephone, fax or internet address listed below.



Distributed by:



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